

Pixel And Vector Painting

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Painting pixel brush strokes

You can use Pixel Persona to add photo-realistic textures to your vector designs using pixel brushes. Alternatively, you can use basic hard- and soft-edged pixel brushes to add shadows and highlights to your work.



Before

Before and after adding brush textures clipped to vector shapes.

Brushes

Affinity Designer provides an impressive selection of pixel brush designs for use with your Paint Brush Tool. Each category contains brushes of varying properties and characteristics.

You can also create your own pixel brushes to assist with your design work. If you want to save a brush, these can be stored in the panel as a custom brush for future use.

 **Clipping pixel brush strokes to vector objects** helps to create shadows and highlights efficiently.

▼ To paint pixel brush strokes:

1. Use the **Layers** panel to select the pixel layer that you want to work on, or create a new pixel layer.
2. From the **Tools** panel, select the **Paint Brush Tool**.
3. Do one of the following:
 - On the **Brushes** panel, select a brush thumbnail of your choice. The tool uses a soft-round brush by default.
 -  To continue with a previously used brush (current session only): On the **Layers** panel, select **Recent brushes** on the layer entry and select a brush thumbnail from the pop-up menu.
4. Adjust the context toolbar settings.
5. Select a stroke color from the **Color** panel.

6. Drag on the page in the direction that you want the brush stroke to follow.

By default, if you switch away from a brush tool, when you return to it the last used brush will be remembered (even any modified settings), with the Brushes panel automatically scrolling to the brush; switching across brush categories is automatic. You can switch off auto-scrolling/auto-switching in the Brushes panel's preferences if needed.



If the selected brush tool does not paint anything, check for a **Protect alpha** option on the context toolbar. When that is enabled, the brush will not paint on the current layer's transparent regions, only those that are opaque.

▼ To smooth brush strokes as you paint:

- On the context toolbar, enable the **Stabilizer** option and choose one of the following:
 - **Rope mode**—drag the stroke end by a 'rope' that smooths the stroke but lets you introduce sharp corners at increasing **Length** (radius) values by redirecting the slackened rope.
 - **Window mode**—smooths the stroke by averaging the stroke's position over a **Window** whose size is configurable.



Modifier keys

When using the Paint Brush Tool, the following modifier keys can be used:

- To draw a straight brush stroke, lay down your initial stroke, then **Shift**-click at the position where your stroke is to end; keep the key pressed to continue the straight line stroke.
- To constrain a stroke to the X-axis or Y-axis, press the **Shift** key immediately after your initial stroke is laid down, then drag along the X or Y axis to the position where your stroke is to end; keep the key pressed to continue the stroke.
- Hold the **Alt** key and press the left mouse button to pick up a new color under the brush to paint with.
- Pressing **Alt** key while selecting a new raster brush from the Brushes panel ignores size and the associated tool (if set).
- To ignore only the associated tool while selecting a brush from the panel, press **Shift** and **Alt** keys together.
- Press the **Ctrl** and **Alt** keys together and:
 - Click to cycle between width and hardness, shape and spacing, and rotation attributes.
 - Drag left/right or up/down to adjust the corresponding attribute. For example, with width and hardness attributes selected, drag left/right to adjust the first attribute and up/down to adjust the second attribute.



Settings (or Preferences)

Related behaviors can be adjusted from [the app's settings](#):

- **Miscellaneous>Reset Fills**
- **Miscellaneous>Reset Brushes**
- **User Interface>Show brush previews**
- **User Interface>Always show brush crosshair**

SEE ALSO:

[Paint Brush Tool](#)

Painting pixel brush strokes

You can use Pixel Persona to add photo-realistic textures to your vector designs using pixel brushes. Alternatively, you can use basic hard- and soft-edged pixel brushes to add shadows and highlights to your work.



After (Click/Tap)

Before and after adding brush textures clipped to vector shapes.

Brushes

Affinity Designer provides an impressive selection of pixel brush designs for use with your Paint Brush Tool. Each category contains brushes of varying properties and characteristics.

You can also create your own pixel brushes to assist with your design work. If you want to save a brush, these can be stored in the panel as a custom brush for future use.

 **Clipping pixel brush strokes to vector objects** helps to create shadows and highlights efficiently.

▼ To paint pixel brush strokes:

1. Use the **Layers** panel to select the pixel layer that you want to work on, or create a new pixel layer.
2. From the **Tools** panel, select the **Paint Brush Tool**.
3. Do one of the following:
 - On the **Brushes** panel, select a brush thumbnail of your choice. The tool uses a soft-round brush by default.
 -  To continue with a previously used brush (current session only): On the **Layers** panel, select **Recent brushes** on the layer entry and select a brush thumbnail from the pop-up menu.
4. Adjust the context toolbar settings.
5. Select a stroke color from the **Color** panel.

Modifying pixel brushes

Pixel brushes can be modified before you paint on your design. Basic modifications can be made from the context toolbar, while advanced adjustments can be made from the **Brushes** panel. Both methods set brush properties for subsequent brush strokes, but the latter edits your brush permanently.

Settings

The following settings are available:

General

- **Size**—sets the default width of the stroke. This can still be overwritten for individual brush strokes using the context toolbar.
- **Accumulation**—sets the deviation in the opacity or visibility of the stroke as it is painted.
- **Hardness**—how hard the edges of the brush are. The brush appears softer as the percentage decreases.
- **Spacing**—sets the distance between each nozzle point. A lower percentage results in the nozzles blending together to give a flowing stroke. A higher percentage pushes nozzles away from each other creating a spray-style stroke.
- **Flow**—controls how fast color is built up under your brush.
- **Shape**—sets the diameter of the brush nozzles.
- **Rotation**—sets the angle at which the brush nozzles are drawn. Great for non-round brushes, e.g. for calligraphic effects.
- **Blend Mode**—changes how the applied color interacts with existing colors on a layer. Select from the pop-up menu.
- **Wet edges**—sets the default 'wet edge' behavior of the brush. Select from the pop-up menu. Check **Custom** and apply a preset or custom profile, which subtly changes how watery the stroke appears.
The 'wet edge' behavior builds paint up along the edges of your pixel brush stroke, producing a watercolor effect.
- **Associated Tool**—sets the tool which is automatically selected when the brush is selected. Select from the pop-up menu. The associated tool's icon will appear next to the brush on the **Brushes** panel.

Dynamics

- Jitter settings determine the extent to which a chosen controller (Pressure, Velocity, Rotation, etc.) will affect the above General settings. Pick a controller from the pop-up menu and click the adjacent Ramp profile icon to select a standard profile from lower thumbnails or create your own using the ramp chart. Move circular nodes to reshape the ramp, add nodes to the ramp by clicking on the line, or select a node to delete a node with the **Backspace** key (simplifying the ramp). Check **Linear** for straight lines between all nodes; If unchecked (non-linear), nodes are connected using smooth curves.
- **Scatter X**—sets the deviation in the horizontal position of the stroke the preset will allow as a stroke is painted.
- **Scatter Y**—sets the deviation in the vertical position of the stroke the preset will allow as a stroke is painted.

 Hue, Saturation, and Luminosity Jitter settings affect the brush color, which is set via the **Color** panel. Similarly, Flow Jitter affects brush opacity, also set on the Color panel.

Texture

For nozzle control:

- **Brush Nozzles**—displays the nozzles currently used in the current brush.
- **Add**—adds an additional nozzle to the preset.
- **Remove**—deletes the selected nozzle from the preset.
- Nozzle-specific controller (Pressure, Velocity, Rotation, etc.)—For multi-nozzle brushes, pick a controller from the pop-up menu and click the adjacent Ramp profile icon to select a standard profile from lower thumbnails or create your own using the ramp chart.
- **Interpolate**—when checked, the quality of the brush tip is improved when affected by the currently set brush tip controller option.

For base texture control:

- **Base Texture**—displays the underlying texture or pattern for the current brush.
- **Set Texture**—launches a dialog to add a base texture, as an image, to the brush. For example, to simulate a textured surface like paper or canvas.
- **Remove**—deletes the base texture from the current brush.
- **Invert**—creates a negative version of the texture.

- **Mode**—controls how the base texture contributes to the current brush. Select from the pop-up menu.
 - **None**—the base texture is ignored, so only the brush nozzles are used.
 - **Nozzle**—allows nozzles to build up brush color onto the base texture depending on flow and opacity response.
 - **Final**—the density of the base texture is kept constant, with no nozzle flow or opacity response.
- **Scale**—sets the size at which the texture is displayed. A lower percentage will display the texture at a larger size. A higher percentage will display the texture tiled at a smaller size.

 Images for base textures should be JPEG or PNG. Any reasonably sized image will be acceptable as the base texture can be scaled (above). We recommend using an 8bit grayscale image with a size greater than or equal to 1024 x 1024 pixels. 16bit brushes will generally be slower with no appreciable increase in quality but can also be used.

Sub Brushes

- **Drawing**—controls where the sub brush is drawn in relation to the main brush.
- **Blending**—controls how the sub brush blends with the main brush.
- **Sync size**—when checked, sets the default width of the stroke to match that of the main brush.
- **Sync spacing**—when checked, sets the distance between each nozzle point to match that of the main brush.

Additional settings:

- **Reset**—returns all stroke settings to those of the saved brush preset.
- **Duplicate**—saves the current stroke settings to a new preset.
- **Close**—exits the dialog and applies stroke settings to the selected preset.

▼ To modify pixel brush settings:

1. Do one of the following:
 - With the Paint Brush Tool selected, on the context toolbar, click **More**.
 - On the **Brushes** panel, click **Edit Brush**.
 - On the **Brushes** panel, double-click the brush you would like to alter.
2. Adjust the settings in the dialog.
3. Click **Close**.

 For more information on creating custom pixel brush presets, see the [Creating custom pixel brushes](#) topic.

▼ To rename a brush:

1. Do one of the following:
 - On the **Brushes** panel, click **Edit Brush**.
 - With the Paint Brush Tool selected, on the context toolbar, click **More** and then **Save As** in the pop-up dialog.
 - On the **Brushes** panel, Right-click the brush you would like to rename and select **Edit Brush**.
 - On the **Brushes** panel, double-click the brush you would like to rename.
 - On the **Brushes** panel, Right-click the brush you would like to rename and select **Rename Brush**.
2. Enter the new name for the brush.
3. Press **Return** to confirm.
4. Click **Close** or **OK** in the dialog, depending on the option from those listed above.

▼ To load a bitmap to a brush stroke:

1. In the **Pixel Persona**, from **Tools** select the **Paint Brush Tool**.
2. On the **Brushes** panel, select a brush.
3. Do one of the following:
 - From your Explorer window, drag a bitmap file and drop it onto the **Swatches** panel, **Color** panel or the active color selector.
 - From the **Assets** panel, drag an asset, e.g. a texture, onto the **Swatches** panel, **Color** panel or the active color selector.
 - From the **Stock** panel, click or drag a photo onto the **Swatches** panel, **Color** panel or the active color selector.

Bitmap loaded brushes are great for stamp-styled strokes, where a single click on the page places the loaded texture. They are often used in placing a watermark, e.g. the author's logo on digital artwork.

Paint Brush Tool controller options

Option	Device	Description
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Random	Tablet pen, mouse	The value of the attribute will be randomly determined based on the percentage of jitter set. The range of this jitter can be seen by the length of the blue bar in the General tab.
Pressure	Tablet pen	The appearance of the brush stroke will be affected by the amount of pressure applied to the tablet.
Angle	Tablet pen	The behavior of the brush stroke will be mapped to match the angle of the tablet pen (this varies from 0 to 360°).
Tilt	Tablet pen	The behavior of the brush stroke will be mapped to match the tilt of the tablet pen (this varies from 0 to 90°).
Rotation	Tablet pen ^{1, 2}	The behavior of the brush stroke will be mapped to match the tablet pen's barrel rotation.
Cyclic	Tablet pen, mouse	The behavior of the brush stroke will cycle between the range of available values shown on the slider. ³
Velocity	Tablet pen, mouse	The appearance of the brush stroke will be modified as the speed of the tablet pen or mouse movement increases. The range of the jitter can be seen by the length of the blue bar with low velocity on the left and high velocity on the right.
Velocity Inverse	Tablet pen, mouse	The appearance of the brush stroke will be modified inversely as the speed of the tablet pen or mouse

movement increases. The range of the jitter can be seen by the length of the blue bar with high velocity on the left and low velocity on the right.

Direction	Tablet pen, mouse	The appearance of the brush stroke will be affected by the direction the pen or mouse is moving in.
Wheel	Tablet pen ^{1, 2}	The appearance of the brush stroke will change depending on the setting of the wheel on the airbrush pen.
Distance	Tablet pen, mouse	The width of the brush stroke will be affected by the length of the continuous stroke.

¹ This setting is only supported on certain Wacom tablet pens.

² The Apple Pencil does not support this setting.

³ You will need to ensure the **Jitter** setting is sufficiently high enough for the effect to change.

SEE ALSO:

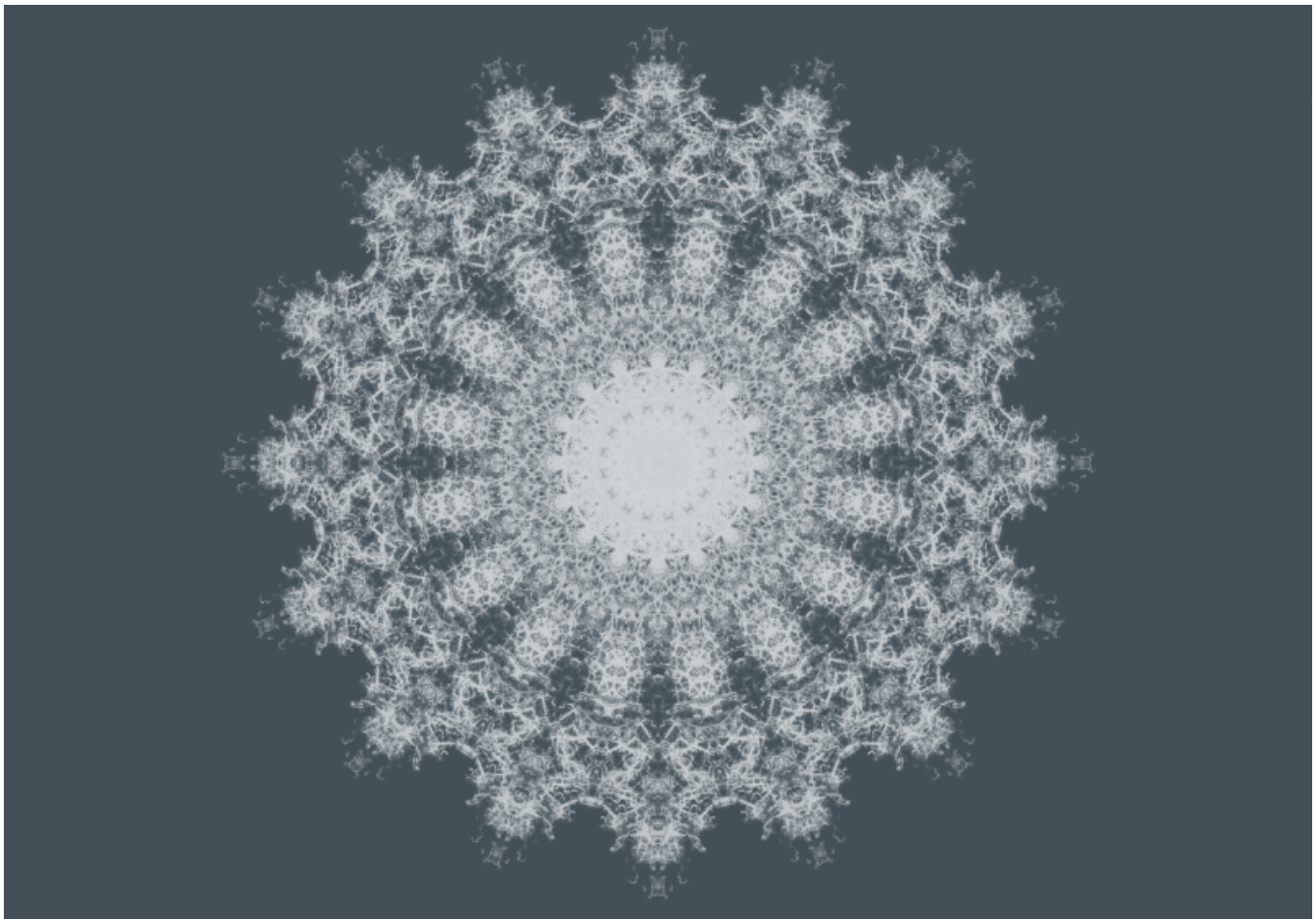
- [Painting pixel brush strokes](#)
- [Creating custom pixel brushes](#)
- [Creating multi-brushes](#)

Symmetry and Mirror

Use Symmetry and Mirror options while painting with the **Paint Brush Tool** (in Pixel Persona) to create controlled and pattern-like compositions.

Symmetry painting

Using the **Symmetry** and **Mirror** options found on the Paint Brush Tool's context toolbar, you can create variable repeating patterns with radial or Mandala-style symmetry over one or multiple planes.



Mirrored brush strokes applied to create a pattern.

▼ To create symmetrical and mirrored effects:

1. From the Tools panel, select the **Paint Brush Tool**, then consider the following:
 - Enabling the **Symmetry** option from the context toolbar allows you to produce symmetrical or mirrored drawings over one or multiple planes.
 - Rotate the symmetry plane about the center of the drawing by dragging from anywhere along the primary symmetry line. Pressing the **Shift** key will make the line snap to 15° intervals.

- Click the **Lock** setting to lock the symmetry line in place. With the setting unchecked, you can reposition the symmetry origin and draw symmetrical and mirrored patterns elsewhere on the page.
- Use the live brush preview to see the direction of the symmetrical brush strokes. If the direction needs to be mirrored, check the **Mirror** option on the context toolbar.
- If you wish to work with more than one plane of symmetry, click the field value box next to **Symmetry** and adjust the number of planes. You can use up to 16 planes in total.

2. Paint on the page.



A dreamcatcher design with a symmetrical pattern.



A dreamcatcher design with a mirrored pattern.

▼ To reposition the symmetry origin:

- Drag the symmetry origin to reposition it on the page.



Settings (or Preferences)

Related behaviors can be adjusted from [the app's settings](#):

- **Miscellaneous>Reset Fills**
- **Miscellaneous>Reset Brushes**
- **User Interface>Show brush previews**
- **User Interface>Always show brush crosshair**

SEE ALSO:

[Paint Brush Tool](#)

[Brushes panel](#)



Creating custom pixel brushes

In Pixel Persona, you can create a custom brush from scratch using a raster image, from a copied preset or from a pixel selection. You can also edit existing brushes and either override them or duplicate to save your altered versions.

▼ To edit an existing brush do one of the following:

- With the Paint Brush Tool selected, on the context toolbar, click **More**.
- On the **Brushes** panel, Right-click the brush you would like to modify and select **Edit Brush**.
- On the **Brushes** panel, double-click the brush you would like to alter.
- On the **Brushes** panel, click **Edit Brush**.

▼ To update or reset brush settings:

1. Right-click the brush you would like to modify and select the option.

▼ To create a custom preset brush stroke from scratch:

On the **Brushes** panel, click Panel Preferences and then select:

- **New Intensity Brush**—creates a brush stroke based on the opacity values of a raster image. In the pop-up dialog, navigate to and select a file, and click **Open**.
- **New Round Brush**—creates a brush stroke based on a circular shape.
- **New Square Brush**—creates a brush stroke based on a rectangular shape.
- **New Image Brush**—creates a brush stroke based on the color values of a raster image. In the pop-up dialog, navigate to and select a file, and click **Open**.

The new brush is added to the selected category using default settings. To edit the default settings, follow the procedure below from step 3 immediately below.

▼ To create a custom preset brush stroke from a preset:

1. On the **Brushes** panel, select a brush and click **Edit Brush**.
2. In the dialog, click **Duplicate** and then **Close**.
3. Select the new brush at the bottom of the panel and click **Edit Brush**.
4. Adjust the settings in the dialog. See [Modifying brushes](#) for more information.
5. Click **Close**.



To create a custom image brush from a pixel selection:

1. Make a selection using a pixel selection tool.
2. On the **Brushes** panel, choose a category to save your brush to.
3. click Panel Preferences and then select **New Brush From Selection**.

The image brush is added to the end of the current brush category. Custom intensity brushes can also be created from a mask layer that has a pixel selection in place by using the same process.

 If you are creating a brush from a selection on a placed image, its image layer needs to be rasterized first.

 Additional options from  Panel Preferences allow you to create, rename, delete, import and export brush categories.

For organization purposes, it is suggested to move or copy custom brushes to any created category by **Right**-clicking and selecting a category name from the **Move Brush to Category** or **Copy Brush to Category** menu option. Custom categories adopt the naming convention 'Brushes', 'Brushes 2', 'Brushes 3', etc.

SEE ALSO:

[Brushes panel](#)

[Modifying pixel brushes](#)

[Creating multi-brushes](#)

[Rasterizing](#)

Erasing

Designer lets you erase areas of a pixel or vector layer using a combination of the Erase Brush Tool, the Brushes panel and the tool's context toolbar. Typically you'd erase previously unwanted pixel brush strokes on a pixel layer.

Erasing on a pixel layer

If you're working on a pixel layer, you can use the Erase Brush Tool to erase unwanted pixels directly on the layer.

▼ To erase on a pixel layer:

1. From the Tools panel, select the **Erase Brush Tool**.
2. From the Brushes panel, select a brush thumbnail of your choice.
3. Adjust the brush width and other brush-related properties from the context toolbar above your workspace.
4. Drag on the page in the direction that you want the erase brush stroke to follow.

Erasing on a vector layer

Pixels don't exist on a vector layer so a pixel mask is created and applied over the vector layer instead; the vector layer remains unaffected. By painting with pixel brushes directly on the mask, you can decide what can be shown or hidden on the underlying vector layer.

▼ To erase on a vector layer:

1. From the Layers panel, select the vector layer, group or object contained within it.
2. Switch to Pixel Persona.
3. From the Tools panel, select the **Erase Brush Tool**.
4. The tool uses a soft-round brush by default. To use a different brush style, choose one from the **Brushes** panel.
5. On the context toolbar, change the brush values as desired.
6. Paint on the vector layer to erase.

You'll notice a vector mask thumbnail appear next to the layer, group or object. While this remains selected you can continue erasing. Selecting the adjacent vector thumbnail allows you to edit the vector layer, or group or object again.

 Using the **Assistant** you can control how pixel erasing works on vector layers. You can optionally rasterize the layer, group or object completely (flattening the layer) or take no action (preventing erasing from occurring).

SEE ALSO:

[Erase Brush Tool](#)

[Brushes panel](#)

[Painting pixel brush strokes](#)

[Assistant Settings](#)

[Keyboard shortcuts for painting operations](#)

Retouch

Retouching is the process of correcting, enhancing, or creatively manipulating a photo.

In contrast to the adjustment layers, the retouch brushes apply modifications to a selected pixel layer, thereby affecting individual pixels on the layer.

The retouch brushes provide the opportunity for precision work in editing images and pixel layers. For example, the **Dodge Brush** is ideal for lightening areas of shadow within a photo while leaving other areas unaffected.

▼ The retouch brushes available include:

-  **Dodge**—Dodging adjusts the exposure under the brush stroke to lighten the painted area. This has the opposite effect to Burning.
-  **Burn**—Burning adjusts the exposure under the brush stroke to darken the painted area. This has the opposite effect to Dodging.
-  **Smudge**—Smudging is a technique which allows you to blend pixels within an image. The brush 'picks up' color from the click point and 'drags' it in the brush stroke direction.
-  **Blur**—Blurring reduces the contrast between pixels under the brush stroke, thereby softening the edges of the painted area. This has the opposite effect to Sharpening. Blurring does not smear color within the painted area like Smudging.
-  **Sharpen**—Sharpening increases the contrast between pixels under the brush stroke, thereby enhancing the edges of the painted area. This has the opposite effect to Blurring.

▼ To use a retouch brush:

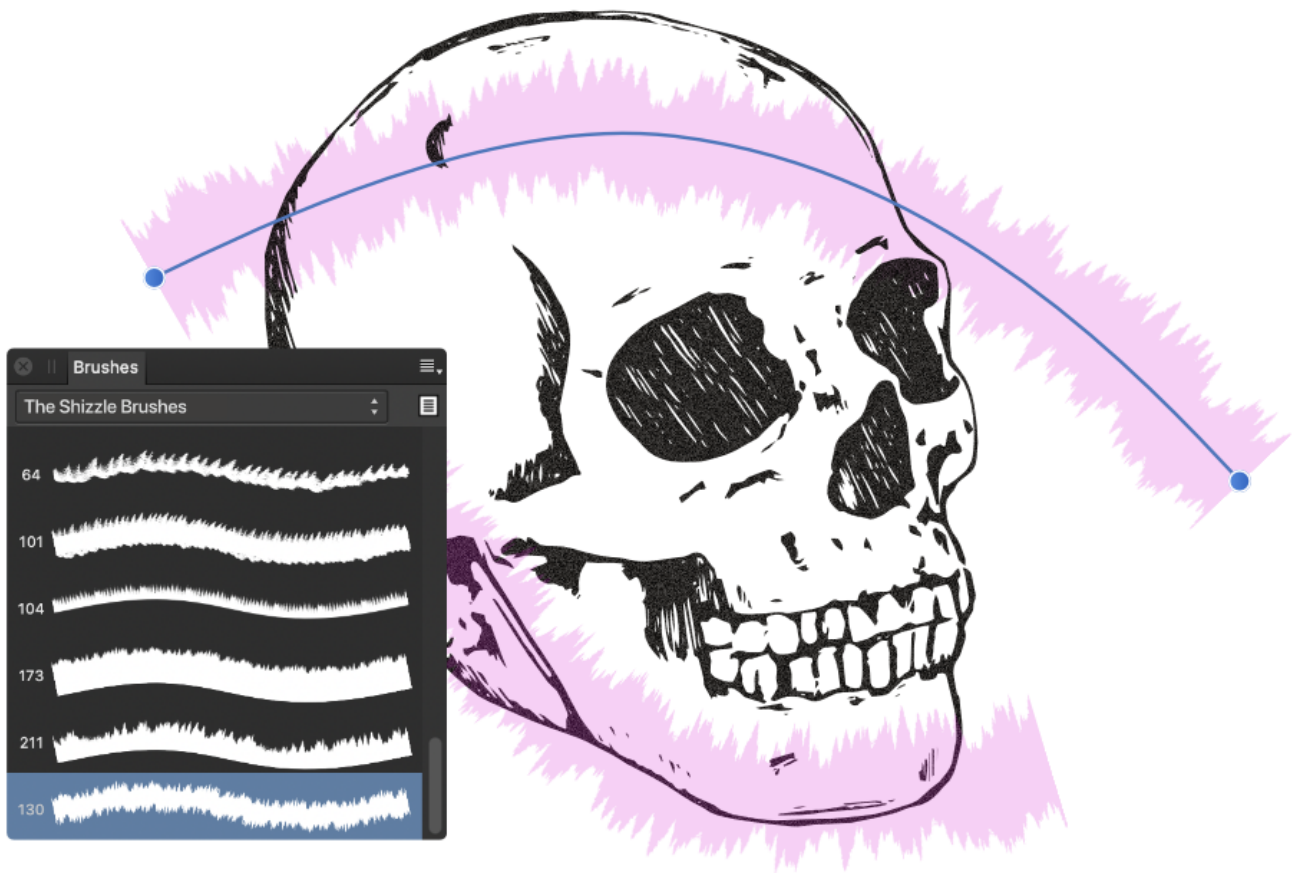
1. Use the **Layers** panel to select the pixel layer that you want to work on.
2. Click a retouch brush tool.
3. The tool uses a soft-round brush by default. To use a different brush style, choose one from the **Brushes** panel.
4. On the context toolbar, change the brush values as desired.
5. Drag on the image to apply the effect under the brush stroke.

SEE ALSO:

[Paint Brush Tool](#)

Painting vector brush strokes

Use the Vector Brush Tool to apply vector brush strokes to your design.



Vector painting

Affinity Designer provides an impressive selection of vector brushes for use with your Vector Brush Tool with each category containing brushes of varying properties and characteristics; vector brushes are only available via **Designer Persona**. As well as using the Vector Brush Tool to apply 'freehand' vector brush strokes to your page, brush strokes can be applied to object outlines and around photos.

A key characteristic of vector brush strokes (compared to raster brush strokes) is that they can be edited using the Node Tool after applying to the page.

Brush strokes are applied to your page using a combination of the Vector Brush Tool, the Brushes panel and the tool's context toolbar.

If you want to save a brush, these can be stored in the panel as a custom brush for future use.



For additional photo-realistic textures, you can use the Paint Brush Tool (e.g., spray brushes) and other brush-based tools to enhance your vector design.



To paint vector brush strokes:

1. From the **Tools** panel, select the **Vector Brush Tool** on the **Pencil Tool** flyout.
2. From the **Brushes** panel, select a brush thumbnail of your choice.

3. Adjust the context toolbar settings.
4. Drag on the page in the direction that you want the brush stroke to follow.

 You can pick up color as you design by using the **Alt** key and dragging.

▼ To smooth brush strokes as you paint:

- On the context toolbar, enable the **Stabilizer** option and choose one of the following:
 - **Rope mode**—drag the stroke end by a 'rope' that smooths the stroke but lets you introduce sharp corners at increasing **Length** (radius) values by redirecting the slackened rope.
 - **Window mode**—smooths the stroke by averaging the stroke's position over a **Window** whose size is configurable.

▼ To edit brush strokes after you paint:

- Press the **Ctrl** key to move displayed nodes and adjust control handles. Color and opacity can be altered from the **Color** panel.

 With **Ctrl** key pressed, you can edit other brush strokes in the same way by clicking them.

▼ To apply a vector brush stroke to a selected shape:

1. From the **Stroke** panel, select the **Texture Line Style** and a **Width**.
2. From the **Brushes** panel, select a brush thumbnail of your choice.
3. If needed, click **Properties** to edit the brush used as your Texture Line Style via a Brush dialog.

 Press the **Ctrl** and **Alt** keys together and drag on the page. Dragging left or right will decrease or increase the brush size, respectively.

▼ To retain your vector brush stroke width when changing brushes:

- With **Alt** key pressed, select a new vector brush from the **Brushes** panel.

Settings (or Preferences)

Related behaviors can be adjusted from [the app's settings](#):

- **Miscellaneous>Reset Fills**
- **Miscellaneous>Reset Brushes**
- **User Interface>Show brush previews**
- **User Interface>Always show brush crosshair**

SEE ALSO:

[Vector Brush Tool](#)

[Brushes panel](#)

[Modifying vector brush strokes](#)

Modifying vector brush strokes

A vector brush stroke applied to the page remains fully editable and can be modified, while the stroke is selected. On the context toolbar, you can change its stroke width or color; on the Stroke panel you can change its profile, while the Brushes panel lets you swap the brush for another.



For more advanced brush settings you can also use the **Edit** button on the Brushes panel, with the option to save your brush stroke setting as a new brush preset.

Settings

The following settings are available in the Brush dialog's **Stroke** section:

- **Brush Width**—sets the size of the stroke.
- **Size Variance**—sets the amount of brush width deviation allowed as a stroke is painted.
- **Opacity Variance**—sets the amount of transparency deviation allowed as a stroke is painted.
- The controller pop-up menu varies the brush size and opacity according to a particular input: 'Pressure' for pen tablets, and 'Velocity' or 'Velocity Inversed' for mice. The last two options simulate pressure relative to the speed of mouse movement. Click the adjacent Ramp profile icon to select a standard profile from lower thumbnails or create your own using the ramp chart. Move circular nodes to reshape the ramp, add nodes to the ramp by clicking on the line, or select a node to delete a node with the **Backspace** key (simplifying the ramp). Check **Linear** for straight lines between all nodes; If unchecked (non-linear), nodes are connected using smooth curves.
- The profile pop-up menu sets the behavior of the controller.
- **Body**—determines the method with which the central section is drawn along the length of the stroke.

- **Corners**—determines the method used to control how corners are drawn within the stroke.
- **Head Offset**—sets the transition point at which the head section becomes the body section.
- **Tail Offset**—sets the transition point at which the body section becomes the tail section.
- Drag the red dotted lines on the lower preview to set the length of the brush body. As the lines are repositioned the Head and Tail Offset values will update.
- **Reset**—returns all stroke settings to those of the saved brush preset.
- **Duplicate**—saves the current stroke settings as a preset brush.
- **Close**—exits the dialog and applies stroke settings to the selected object.

▼ To modify vector brush strokes:

1. Select the Vector Brush Tool, unless already selected.
2. **Ctrl**-click on the brush stroke.
3. On the context toolbar, click **More**.
4. Adjust the settings in the **Stroke** section.
5. Click **Close**.

💡 You can paint on the page while the Brush dialog is open. The stroke will adopt the current settings in the dialog. This allows you to adjust the full brush settings as you paint for increased efficiency.

✎ For more information on saving your settings as a preset, see the [Creating custom brushes](#) topic.

SEE ALSO:

[Painting brush strokes](#)

[Create custom vector brushes](#)

[Vector Brush Tool](#)

[Brushes panel](#)

Creating custom vector brushes

Affinity comes complete with a range of preset brushes which you can customize to suit your needs. Alternatively, you can create a custom brush from scratch using your own image.

▼ To modify a preset brush stroke:

1. On the **Brushes** panel:
 - Select a preset.
 - Click **Edit Brush**.
2. Adjust the settings in the **Stroke** section.
3. Do one of the following:
 - Click **Duplicate** to save the modified preset to a new custom preset.
 - Click **Close** to save the custom settings to the current preset.
 - Click **Reset** to return settings to those of the preset.

 For more information on adjusting stroke settings, see the [Modifying brush strokes](#) topic.

▼ To create a custom preset brush stroke from scratch:

On the **Brushes** panel, click the panel preferences icon and then select:

- **New Solid Brush**—creates a basic, solid vector stroke.
- **New Textured Intensity Brush**—creates a brush stroke based on the opacity values of a raster image. In the pop-up dialog, navigate to and select a file, and click **Open**.
- **New Textured Image Brush**—creates a brush stroke based on the color values of a raster image. In the pop-up dialog, navigate to and select a file, and click **Open**.

The new brush is added to the selected category using default settings.

 Additional options from the  panel preferences menu allow you to create, rename, or delete custom brush categories, as well as import a brush set as a new category or export the current category as a brush set.

For organization purposes, it is suggested to move or copy custom brushes to any created category by **Right**-clicking and selecting a category name from the **Move Brush to Category** or **Copy Brush to Category** menu option. Custom categories adopt the naming convention 'Brushes', 'Brushes 2', 'Brushes 3', etc.

SEE ALSO:

[Vector Brush Tool](#)

[Painting vector brush strokes](#)

[Brushes panel](#)

[Modifying vector brush strokes](#)

Pressure sensitivity

Affinity desktop apps offer complete flexibility when using pen tablets for real pressure-sensitive drawing and painting. If you prefer a mouse, Affinity apps offers simulated pressure sensitivity.

Whether you're using vector-based Pen, Pencil or brush tools, or pixel-based brush or retouch tools, you can simply connect your device and you're ready to go.

For mouse users, Affinity apps let your mouse become velocity sensitive by default. The same tools can be used but with simulated pressure sensitivity based on the speed (velocity) of your mouse movements.

While you get the response you need from either input, you'll still be able to fine-tune settings for pressure/velocity.

If you want to create a custom pressure profile that can be applied to a previously drawn stroke, you can design it and apply it from the Stroke panel. This can be optionally saved as is, or modified before saving.

Pressure sensitivity while painting

Pressure-sensitive painting is governed by the brush controller which is set to automatic by default—it senses the type of input device and varies brush size, flow, etc. as you paint according to a particular input:

- For Vector Brush Tool: 'Automatic', 'Pressure', 'Velocity', 'Brush Defaults', or 'None'. Automatic will sense the type of input automatically for you.
- For pixel brushes: 'Pressure', 'Tilt', 'Velocity', 'Velocity Inverse', 'Random', 'Angle', 'Cyclic', 'Direction', 'None'.

If set to 'None', the brush is always a fixed size, flow setting, etc. Otherwise, the brush stroke properties will vary from a minimum to maximum amount (e.g. the full brush width).

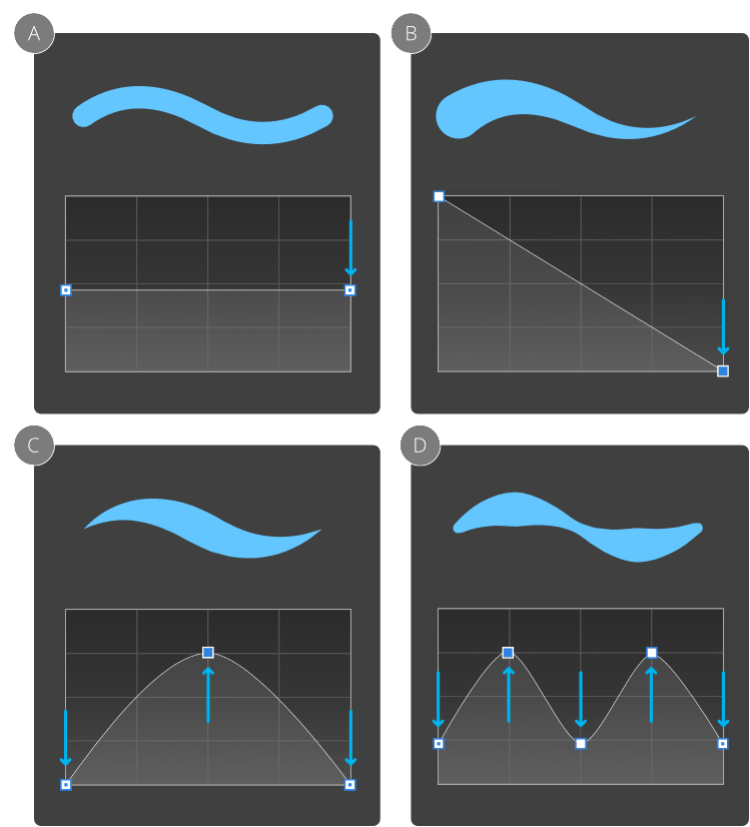
Jitter options

- For vector brush settings: jitter options let you control how brush size and flow are affected by your pressure-sensitive device or mouse.

- Pixel brush settings: as for vector brush options, but additional jitter options are provided that affect brush hardness, shape, color, and the scatter and rotation of nozzles.

▼ To create a custom pressure profile:

1. On the **Stroke** panel, click the **Pressure** input box.
2. Manipulate the chart by moving the square *pressure points* to form the desired pressure profile.
(See examples below.)
3. Begin drawing your strokes.



Uniformly reducing stroke width using locked points (A), linear tapering of stroke (B; unlocked by **Alt**-drag or second click then drag), tapering of stroke at both ends (C; a combination of A and adding a new point by clicking) and modulating stroke width (D; a combination of A and adding multiple points).

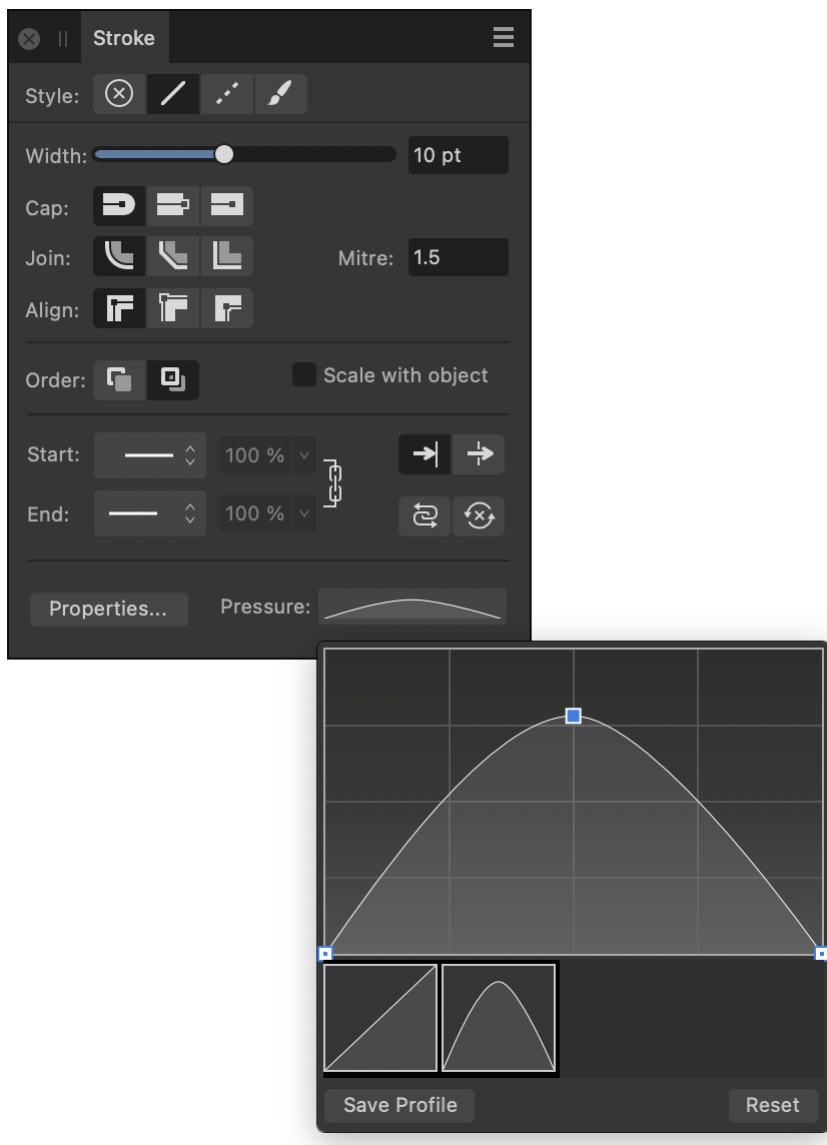
Point type	Description
	End point (deselected)—drag to move <i>both</i> end points up/down at the same time
	End point (selected)—drag to move <i>both</i> end points up or down at the same time or click to move the end point independently of the other end point
	Added point (deselected)— drag to reposition the point which becomes selected
	Added point (selected)—drag to reposition the already selected point

▼ To save a pressure profile:

- Under the chart, click **Save Profile**. The profile shows under the chart.

▼ To apply a custom pressure profile to a selected stroke:

1. From the **Stroke** panel, click the **Pressure** option.
2. Select a custom profile from below the chart. The chart will update, showing the chosen profile.



▼ To reset the pressure profile:

- Select **Reset** below the chart.

The profile reverts to its default.

 Click on any point to select it. Any added points can be deleted by pressing the **Delete** key.